

MAGICIAN 4D

UNIVERSAL REMOTE CONTROL

PRE-PROGRAMMED UNIVERSAL REMOTE CONTROL

*A single remote to operate
Televisions,
Video Players,
Satellite Receivers including SKY™ Digiboxes*

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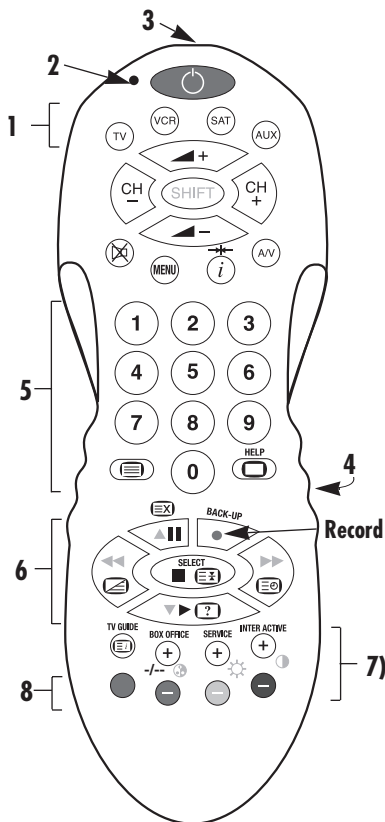
Codes for Satellite Receiverspage 11

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MAIN FEATURES

FUNCTION KEYS

KEY SYMBOL	DESCRIPTION
	POWER ON/OFF
	MUTE
	VOLUME +/-
	CHANNEL +/-, C/P +/-
	CHANNEL 1/2 DIGIT MODE
	A/V SOURCE 1
	INFORMATION/INDEX
	NORMAL
	HELP
	PLAY
	STOP
	PAUSE
	FAST FORWARD (SKY™ MENU RIGHT)
	REWIND (SKY™ MENU LEFT)
	SKY™ MENU UP
	SKY™ MENU DOWN
	RECORD (red circle)
	TELETEXT ON
	TV ON (FROM TEXT TO TV)
	MIX (TV AND TELETEXT COMBINED)
	HOLD PAGE (TELETEXT)
	REVEAL (TELETEXT)
	UPDATE (TELETEXT)
	TIMER (TELETEXT)
	TOP OF PAGE (TELETEXT)
	BOTTOM OF PAGE (TELETEXT)
	FASTEXT RED
	FASTEXT GREEN
	FASTEXT YELLOW
	FASTEXT BLUE
	CHANNEL/PROGRAMME STORE
	CHANNEL/PROGRAMME STORE
	C/P (CHANNEL PROGRAMME)



- | | |
|--------------------------|---------------------------------|
| 1. DEVICE INDICATOR keys | 5. Number keypad |
| 2. STATUS INDICATOR | 6. Text & VCR keypad |
| 3. Infra red transmitter | 7. Colour, Brightness, Contrast |
| 4. Battery compartment | 8. Fastext keys |

SHIFT KEY FUNCTIONS

KEY STROKES	FUNCTION
SHIFT	+/- (COLOUR)
SHIFT	+/- (BRIGHTNESS)
SHIFT	+/- (CONTRAST)
SHIFT ①...⑨	Shift 1-9 contain the following groups of functions 10+, 20+, 30+, 40+ ... 11, 12, 13, 14, 15 ...

PLEASE NOTE: You are advised to read the following instructions fully, before attempting to program your Universal Remote Control. The set-up procedure will cancel itself if no keys are pressed for more than 10 seconds in order to protect your code against accidental re-programming, and to conserve battery power. It would therefore be helpful to you to understand the required programming steps, before you carry out the actual set-up procedure.

MAGICIAN – UNIVERSAL REMOTE CONTROL

Congratulations! Your Universal Remote Control is a state-of-the-art device, which replaces the main functions of several separate remote controls to operate infra-red controlled televisions (TV), videos (VCR) & satellite receivers (SAT).

Your Universal Remote Control (URC) is pre-programmed in the factory. Simply enter the correct device codes for your equipment and your URC is ready to use. A DEVICE CODE LIST is included in the user's manual.

INSTALLING BATTERIES

Your URC requires 2 fresh AAA-size (LR03) batteries (alkaline batteries recommended) :-

1. Remove the battery cover on the back of your URC.
2. Insert the batteries ensuring that the polarity corresponds with the markings in the battery compartment.
3. Push the battery cover back in place.

HOW TO SET UP YOUR URC

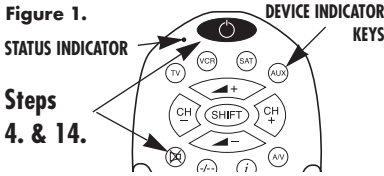
The 4WAY has 4 Device Modes (TV, VCR, SAT & AUX) Your URC can be set-up either by entering the appropriate codes from the list of codes supplied or by using the Library search facility. Instructions for the use of both methods follow.

SETUP BY ENTERING DEVICE CODE

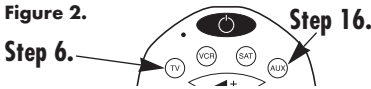
(Note: If you do not touch any keys on your URC within 10 seconds during set-up, your URC will automatically abandon the set-up process and revert to the last entered code. This feature reduces accidental erasure of your codes)

SET UP FOR TV

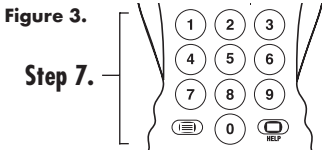
1. Turn on your TV
2. Look up the brand name of your TV in the DEVICE CODE LIST (See page 6-8).
3. Look up the 3-digit Device Code next to the brand name of your equipment. If there is more than one code listed for your brand, start from the first code with the following instructions:
4. Hold down both \odot POWER and \boxtimes MUTE keys on your URC simultaneously until the STATUS INDICATOR lights up and stays red (about 4 seconds).



5. Release the \odot POWER and \boxtimes MUTE keys. The STATUS indicator should still be lit. If not repeat step 4.
6. Press the TV DEVICE INDICATOR key once. The STATUS INDICATOR and the DEVICE INDICATOR should now both be RED.



7. Use the number keys on your URC to enter the 3-digit Device Code. If you have entered a valid code, the STATUS INDICATOR will blink once. If you have entered a wrong code, the STATUS INDICATOR will blink twice.



8. Try the keys on your URC that correspond to similar keys on your original remote control, especially those you use most. (Note that the URC will abandon the set-up procedure if you do not press any keys on the URC for more than 10 seconds). If your TV works on all or most of the keys on your URC, you have entered a suitable Device Code. Go to step 11. (Note: Your URC will only operate functions controlled by your original remote nor are the supplied codes guaranteed to operate all these functions)
9. If the Device Code does not work properly on your TV, press the TV INDICATOR KEY once. The STATUS INDICATOR will blink briefly, then turn RED. The TV INDICATOR should still be RED. (If either of the indicators switch off whilst you are still programming your URC, you should start again from step 3.)
10. Repeat steps 7-9 with the other codes listed for your brand of TV until your URC operates most or all of the functions that correspond with the keys on your original remote control.
11. Once you have found a suitable code, to store it, press the TV INDICATOR key twice. The TV INDICATOR will blink

twice and then go out as will the STATUS INDICATOR.

12. If none of the TV codes listed for your brand of TV work correctly, select the code that provides the best results. Alternatively, try the Library Search method, which is fully explained further on in these instructions.

SET UP FOR VCR AND SAT

Repeat the same set-up method for your VCR and SAT, but remember to press the VCR or SAT DEVICE INDICATOR key, and select the corresponding Device Code listing.

SET UP FOR AUX KEY

The following instructions describe how to configure the AUX key to act as a 2nd TV/VCR/SAT control.

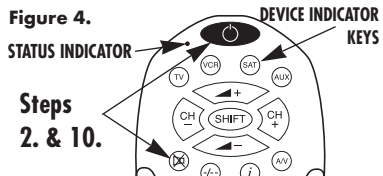
13. First use the TV/VCR/SAT set-up method to find the best code for the device you wish to program into the AUX key following steps 1-11.
14. Wait until all indicator lights have gone out then hold down the \odot POWER and \boxtimes MUTE keys together on your URC, until the STATUS INDICATOR lights up and stays red. [About 4 seconds]
15. Release the \odot POWER and \boxtimes MUTE keys. The STATUS indicator should still be lit. If not repeat step 14.
16. Press the AUX DEVICE INDICATOR key once. (AUX INDICATOR should turn RED)
17. Press briefly the TV or VCR or SAT DEVICE INDICATOR corresponding to the type of device you are programming into the AUX key.
18. Type in the 3 digit code that you found in step 13.
19. Press the AUX key twice to store your code. If you have followed the set-up instructions correctly, the STATUS INDICATOR and DEVICE INDICATOR will turn off. Set up is now complete.

SET-UP BY LIBRARY SEARCH

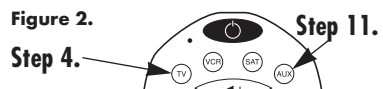
If you cannot identify a suitable Device Code for your equipment from the Device Code List, you may try our library search method. (For many lesser known brands codes may be present but not listed under that brand.) During the search the selected DEVICE INDICATOR will flash at various speeds. The entire search procedure may take several minutes to complete. The following instructions use your television as an example for set-up using the Library Search method.

TV SETUP BY LIBRARY SEARCH

1. Turn on your TV
2. Hold down both \odot POWER and \boxtimes MUTE keys on your URC simultaneously until the STATUS INDICATOR lights up and stays red (about 4 seconds).
3. Release the \odot POWER and \boxtimes MUTE keys The STATUS INDICATOR should still be lit. If not repeat step 2.



4. Press the TV DEVICE INDICATOR key once. The STATUS INDICATOR and the DEVICE INDICATOR should now both be RED.



5. To search, aim your URC at your TV.

6. Press the POWER key repeatedly for 2 seconds ON and two seconds OFF, until your TV goes into standby mode (i.e. the TV switches OFF). Then continue with step 7. If the TV INDICATOR key flashes twice and then goes out before your TV goes into standby mode you have reached the end of the library. Return to step 2 and repeat library search one more time.
7. Try the number keypad to see if your device switches ON again and the keys work correctly. If your device does not switch ON, press the \times Mute key and then the \odot Power key to repeat the code so that the Device comes ON. Now try the number keypad. (NOTE: If you accidentally skipped a code that turned your TV ON or OFF, you can return to the skipped code by pressing the \times Mute key.)
8. If the code you have found does not work correctly, make sure that the TV INDICATOR and STATUS INDICATOR are still red, before you repeat steps 6 and 7 until you find a better code. If the indicator lights have gone out, repeat the set-up procedure from step 2.
9. Once you are happy with the code found, press the TV INDICATOR key once to store the code. The STATUS INDICATOR and DEVICE INDICATOR will turn off and set-up is complete.

VCR & SAT SETUP BY LIBRARY SEARCH

Simply repeat the above procedure to search for the Device Codes for your VCR and SAT but instead of the TV DEVICE INDICATOR key press either the VCR or SAT DEVICE INDICATOR key in step 4

AUX SETUP BY LIBRARY SEARCH

10. Follow steps 2 and 3 in TV SETUP BY LIBRARY SEARCH.
11. Press the AUX DEVICE INDICATOR key once. (AUX INDICATOR should turn RED)
12. To set up a TV on the AUX DEVICE KEY follow steps 4 to 8.
13. Once you are happy with the code found, press the AUX INDICATOR key once to store the code. The STATUS INDICATOR and DEVICE INDICATOR will turn off and set-up is complete. Your TV will now work when the AUX key is selected.

To operate a VCR or SAT using the AUX key, follow steps 10 to 13 as for TV but instead of the TV DEVICE INDICATOR key press either the VCR or SAT DEVICE INDICATOR key in step 10

OPERATING YOUR URC

Once you have set up your URC, it should operate similarly to your original remote control and perform most or all of the main functions. To operate, just aim it at your equipment, press the appropriate DEVICE INDICATOR key and press the required function key. The DEVICE INDICATOR flashes during signal transmission to confirm that a function key is in operation.

Please Note: The URC can only duplicate functions that are on your original remote control. Any extra keys on the URC which are not on the original will not function.

SHIFT Functions

To operate a secondary function, press SHIFT followed by the corresponding function key. The SHIFT key remains functional for as long as any other key is operated, or until 5 seconds have elapsed after the last key pressed. When the SHIFT key is operated, the STATUS INDICATOR lights up green and the DEVICE INDICATOR red while the SHIFT key is pressed down. The STATUS INDICATOR then stays ON for another 5 seconds. The SHIFT key can be cancelled before

the 5 seconds time-out period by pressing the SHIFT key again.

MAINTENANCE

1. Do not expose your URC to dust, strong sunlight, humidity, high temperature or mechanical shock.
2. Do not use old and new batteries together as old batteries tend to leak.
3. Do not use corrosive or abrasive cleansers on your URC.
4. Keep the unit dust free by wiping it with a soft, dry cloth.
5. Do not disassemble your URC, it contains no user serviceable parts.

FREQUENTLY ASKED QUESTIONS

- Q. I am unable to program or operate my URC, but the indicator lights on my URC operate correctly.
- A. Check your A/V device. If the device's mains switch is turned off, your URC can not operate your device.
- A. Check if the batteries are low and replace the batteries.
- A. If several Device Codes are listed under the brand name of your A/V device, try each code one by one until most or all of the keys work correctly.
- Q. The STATUS INDICATOR light does not stay ON when entering set up mode.
- A. Make sure both the POWER and MUTE buttons are pressed simultaneously
- Q. My A/V equipment responds only to some commands.
- A. You may have selected a code for which only some commands work correctly. Try the other codes listed for your brand.
- A. Try the Library Search if you are still unsuccessful.
- Q. Some of my equipment will not work with any of the codes listed.
- A. Make sure that you have selected the correct device listing
- A. Try the Library Search function as some more recent

Disclaimer: Whilst we have tried to supply a comprehensive library of codes we cannot guarantee that your URC will be fully compatible with all equipment. Some brands, models or functions may not be available in the code library due to differences in operation to your original remote or where the code has not yet been added to the library. The manufacturer cannot accept any liabilities resulting from incorrect use of this product.

SPECIFICATIONS

Operating system:- Pre-programmed infra-red remote control system.

Compatibility:- Operates most brands of infra-red remote controlled TV's, VCRs, Sat.'s.

Power requirement:- 2 x AAA-size alkaline batteries.

Effective range:- 7.65M (25 feet), +/- 25 degrees.

Alkaline battery life:- Normal operation 6 months.

Dimensions:- 199 (L) x 56 (W) x 24 (H) mm.

Weight without batteries:- 105g

LOW BATTERY LEVEL

If the indicator flashes twice slowly after pressing a key function, the battery level is low & you must fit new batteries. If the batteries are removed, your URC will retain its memory for approximately 10 minutes only.

Customer Care Line—Tel: 08457 573 479 (UK only)

Technical Support Web Site: <http://technical.philex.com>

Technical Web Site Enquiries: technical@philex.com

DEVICE CODES

BRAND	CODE	BRAND	CODE	BRAND	CODE
TV codes		BECESE	025 033 045 046	CRAIG	196
ACTION	049 063 086 090	BECESE	047 049 057 063	CROSLLEY	049 070 077 091
	137 139 196		065 090 104 114		101 102 114 144
ADMIRAL	024 033 067 083		144 196	CROWN	033 063 070 076
	101 102 134 146	BEKO	076 077 174 196		077 079 087 139
	196		220 239		146 196
ADVENTURA	144		240 246 277 278	CS ELECTRONICS	117
ADYSON	063 120 196		289	CTC CLATRONIC	019
AGAZI	134	BELL&HOWELL	042 146 196	CURTIS MATHES	042 046 063 114
AKAI	010 012 013 025				137 196
	028 029 033 039	BENCHMARK-		CYBERTRON	120
	047 063 086 114	BEAUMARK	063 137 139 196	DAEWOO	063 120 139 143
	117 121 124 132	BEST	076 077		147 196 202 274
	139 140 114 145	BESTAR	077 196	DAINICHI	117
	196 208 224	BLACKSTRIPE	042 045 046 114	DANSAI	063
AKIBA	117		137 177	DAYTRON	045 063 139
AKURA	077 117 121 134	BLAUPUNKT	082 244	DE GRAAF	021 033
	196	BLUE SKY	117 196	DECCA	088 108 109 118
ALBA	059 077 083 117	BOSCH-BAUER	019		120 123 130 196
	121 124 139 196	BRANDT ELECTRON.	090 094 096 249	DESMET	019 196
	224 266	BRINKMANN	083	DIXI	139 196
ALCYON	070	BRION VEGA	102	DORIC	103
ALLORGAN	062 120	BRIORRYEGA	101 196	DTS	139
ALLSTAR	196	BROCKWOOD	033 063 114 144	DUAL	014 065 075 093
AMBASSADOR	145		145		117 120
AMERICAN HIGH	137	BROKSONIC	033 063 114 144	DUMONT	033 063 070 078
ANPLIVISION	120		145		080 087 101 102
AMSTRAD	058 255	BROTHER	134		114 120 144 145
ANGA	145	BRUNS	029 076 101 102	DUMONT-FINLUX	018 073 089 115
ANGLO	139	BSR	003 062	DYNATECH	033 063 114 120
ANITECH	063 070 134 139	BTC	117		144 145
	196	BUSH	003 025 035 059	EATON	137
ANSONIC	077 087 139		070 074 114 117	ECR	114
AOC	063 196		121 124 142 196	ELBE	129
ARC EN CIEL	090 094		224 266	ELBIT	109 196
ARCAM	120	CAMPLE	033 063 114 144	ELCIT	060 087 101
ARISTONA	110 159 187 196		145	ELECTRATUNE	063
ARTHUR MARTIN	073 126 132 135	CANDLE	063	ELECTROBRAND	144
	152	CAPEHART	086 114 196	ELECTROHOME	033 042 049 063
ASA	066 070 078 080	CAPSONIC	134		114 144 145
	089 101 102 104	CARREFOUR	070 196	ELECTRONICA	237
	105 106 115 173	CDMARCY'S	114	ELEKTA	134
	247	CENTURION	196	ELEKTRINIKA	079 196
ASBERG	070 176	CENTURY	101 102 188	ELJN	080 104 154 196
ASORA	139	CGE	070 083 091 188	ELITE	019 042 046 063
ASUKA	117 120 121 134	CIE	058 143		114 117 137 196
ATLANTIC	019 196	CIHAN	109	ELMAN	087
ATORI	139	CIMLINE	059 139	ELTA	139
AUDIO TECHNICA	176	CIRCUIT CITY	033 063 114 144	EMERSON	033 063 102 114
AUDIOSONIC	090 117 120 134		145		144 145
	196	CITIZEN	046 063 137 196	EON	114 137
AUDIOTON	120	CITY	139	ERRES	110 196
AUDIOVOX	196	CLARIVOX	129	ETRON	041 139
AUSIND	070 073	CLATRONIC	019 087 117 120	EURO-FEEL	134
AUTOVOX	014 070 078 101		139	EUROMANN	076 120 134 196
	120	COLORTYME	137 196	EUROPHON	087 118 120 124
BAIRD	208	COMTEL	109		196
BANG&OLUFESEN	101	CONCORDE	139	FENNER	139
BASICLINE	117 121 139 196	CONDOR	019 077 139 154	FERGUSON	071 078 085 097
BASTIDE	120		196		129 174
BAUR	013 014 025 029	CONIC	049 063 114 196		203 204 215 244
	033 034 045 065	CONTEC	107 111 114 139		249 251 269 285
	082 139 144 147	CONTINENTAL ED.	090 094 096	FIDELITY	014
	151 153 196 210	CORONADO	063	FINLANDIA	023 043 173
	244	COSMEL	139		

DEVICE CODES

BRAND	CODE	BRAND	CODE	BRAND	CODE
TV continued		HINARI	041 114 117 121 132 139 142 154 196 208	KAMP	120
FINLUX	003 018 066 069 070 073 078 080 088 089 101 104 105 106 115 120 123 165 166 168 172 173 196 247	HISAWA	117	KAPSCH	009 015 016 025 033
FIRSTLINE	062 120 139 196	HIT	102	KARCHER	076 196 216 247
FISHER	014 042 045 065 077 080 101 111 113 114 120 188	HITACHI	004 005 009 012 018 020 021 023 025 033 034 045 046 047 049 050 051 052 053 054 055 056 057 063 065 084 086 090 094 095 104 114 120 125 126 142 144 175 180 196 205 217 222 223 225 226 252 260 264 276	KATHREIN	122
FLINT	196	HORIZONT	196	KENDO	025 059 087 154 196
FORMENTI-PHOENIX	019 070 073 101 124 196	HORNYPHON	196	KENWOOD	063
FORTRESS	063 101 111 114 146	HOSHAI	117	KLH	033 063 086 114 144 145
FRABA	077	HUSPI ELEKTRONIK	083	KLOSS	137
FRONTECH	025 035 064 120 134 139	HYGASHI	120	KNESSEL	075
FUJITSU	033 063 086 114 120 144 145	HYPER	124 139	KOLSTER	196
FUNAI	033 062 063 114 134 144 145	HYPSON	120 134 196	KONKA	117
GALAXIS	077 083 139	ICE	117 120 124 134 139 196	KORPEL	196
GBC	024 139	IMA	033 063 114 144 145	KORTING	019 076 101
GEC	009 020 049 088 118 120	IMPERIAL	001 025 070 077 083 091 188 196	KRIESLER	110 159 187
GELOSO	025 060 117 139	INGELEN	135 152 158 161 197	KTV	033 063 114 120 144 145
GENEXXA	117 121 196	INGERSOL	139	KUASHO	063 196
GOLDHAND	139	INNO HIT	067 086 117 120 139 196 216	KUBA ELECTRONIC	014 033 065
GOLDSTAR	003 035 049 063 067 077 086 090 120 134 137 139 154 196	INTERBUY	134 139	L. G.	003 035 049 063 067 077 086 090 120 134 137 139 154 196
GOODMANS	120 139 143 154 196 266	INTERCORD	065	LAMONT	120
GORENJE	076 077 122 188	INTERFUNK	009 015 016 025 028 029 030 033 041 068 077 090 101 102 110 151 152 153 158	LENCO	134 139 143 196
GPM	117	INTERVISION	077 087 117 120 134	LENOIR	139
GRADIN	019 117 139 196	IRRADIO	067 069 070 073 117 139 196	LEYCO	062 086 134 196
GRAETZ	023 025 027 029 135 152 158 161 197	IST	117 124 196	LIFETEC	134 139
GRANADA	033 047 086 103 110 118 120 196 239 240	ISUKAI	117 196	LINITRON	063 111 114 146
GRUNDIG	033 070 078 082	ITS	117 120 139	LLOYD	033 063 114 144 145
GRUNDIG	195 244 261	ITT	024 025 033 045 218	LOEWE	101 102 153 196
GZE UNIMOR	077	ITT-NOKIA	135 152 158 161 171 197 208	LOEWE OPTA	118
HALIFAX	134	JACSON	088	LOGIK	107 108 130
HALLMARK	033 063 104 114 144 145	JBL	196	LUMA	024 132 196
HAMPTON	120	JCB	144	LUXOR	004 013 023 025 028 029 033 034 047 067 068 086 126 132 156 158 165 171 173 208
HANSEATIC	014 019 025 062 065 075 139 196	JEC	046	LXI	042 146 177 196
HANTAREX	139	JETPOINT	137	MACYS	063 114
HARLEY DAVIDSON	033 063 114 137 144 145	JUMBOTRONIC	196	M ELECTRONTC	065 080 090 104 120 139
HARRAD	033 063 114 144 145	JVC	114 121 128 142 169 176 193 196 224	MAGNADYNE	173 174 196 247 014 060 087 101 102 118
HARVARD	033 063 114 144 145	KAIDO	035	MAGNFON	070 073 087 118
HCM	076 117 120 134 139	KAISUI	117 120 121 139 196	MAGNASONIC	042 063 139 146 154 177 196
HEATHKIT	144 196			MAGNAVOX	049 114 196
HEMMER MANN	014			MANDOR	134
HIFIVOX	090 094			MANESTH	019 059 120 134 196
				MARANTZ	065 258
				MARK	196
				MATSUI	001 014 035 058 059 085 108 120 124 130 139 141 142 154 196 204 224 228 231 259 261 262
				MAVA	063
				McMICHAEL	049

DEVICE CODES

BRAND	CODE	BRAND	CODE	BRAND	CODE
TV continued			033 036 042 062	PRINZ	065 086
MEDIATOR	196	OKANO	077	PROELCO	076 196
MEGATRON	047	ONWA	117 124	PROFEX	035 139
MELECTRONIC	167	OPERA	196	PROFITRONIC	154 196
MEMOREX	042 134 139 145	OPTANKA	146	PROSCAN	137
MEMPHIS	086 139	ORBIT	196	PROTEC	025 087 120 134
METZ	081 082 101 102	ORBITER	077		139 196
	244	ORION	014 019 033 058	PROTON	063 139
	145		059 062 063 107	PROVISION	154
MGA	145		108 114 130 139	PULSER	049 063 086 090
MIDLAND	063		144 145 196 201		137 139 196
MINERVA	070 078 244	OSAKI	086 117	PYE	110 159 187 265
MINOKA	196	OSUME	086 111	PYMI	139
MITSUBISHI	011 082 101 102	OTTO VERSAND	003 014 019 025	QUASAR	073
	103 112 113 114		029 033 034 035	QUELLE	003 014 025 029
	122 130 131 142		045 059 062 065		030 035 045 058
	145 151 153 163		076 082 090 114		059 062 063 066
	189 196 221 232		120 139 144 146		067 069 070 073
	244 257 279 280		147 151 153 154		078 079 080 082
	281 282		174 186 196 210		089 090 105 106
MIVAR	067 075 118 120		244		107 111 113 114
MONITOR	137	OVP	196		115 120 130 139
MOTION	070	P.T ACTRON	109		144 147 151 152
MOTOROLA	146 196	PACIFIC	236 237 238 266		153 154 168 173
MRELLI	101	PAEL	069 073		186 196 210 244
MTC	033 063 077 137	PALLADIUM	025 077 101 120		247
MULTISTANDARD	087		151 196	QUESTA	114
MULTITECH	025 033 035 063	PANAMA	120 134 139	R LINE	196
	087 114 118 120	PANASONIC	015 025 037 081	RADIALVA	090
	139 144 145 188		116 136	RADINETTE	247
MURPHY	070 074 080 103		148 150 155 186	RADIO SHACK	042 063 146
	266		196 198 290 291	RADIOLA	110 159 187 196
NAD	114 177		292 293 294 295	RADIOMARELLI	060 101 103
NAONIS	024		296	RADIOTONE	134 139 154 196
NATIONAL	155 196	PATHE'CINEMA	019 075	RADIX	045
NEC	114 137	PATHE'MARCONI	090 094	RANK	003 025 035 059
NECKERMANN	025 033 034 077	PAUSA	139		070 074 114 117
	079 101 102 120	PCE/PEC	042 045 046 063		121 124 142 196
	132 144 147 151		114 137 045 177		224 266
	153 154 188 196	PENNEY	046 063 065 137	RCA	137
NEI	117 196	PERFEKT	196	REALISTIC	042
NEW WORLD	117	PERFORMANCE	107 114 144	REDIFFUSION	103
NEWTECH	139 196	PHILCO	049 070 083 091	REDIFUSION	103
NIKKAI	046 063 086 117		101 102 114 188	REVOX	070 196
	134 121 196		196	REX	025 075 093 249
NIKKO	154	PHILHARMONIC	120	RFT	075 076 101 102
NISSAN	137	PHILIPS	049 069 086 095	RHAPSODY	120
NOBLIKO	069 073 078 124		098 101 109 110	RICE CLUB	137
NOGAMATIC	090 094		114 144 147 151	RMB	063
NOKIA	004 009 012 013		154 159 187 196	ROADSTAR	117 134 139
	015 016 022 023		216 258 263	ROYAL LUX	076
	024 025 027 028	PHOENIX	019 073 101 196	RUNCO	137
	029 030 033 036	PHONOLA	101 110 159 187	SABA	009 025 033 041
	038 039 041 042		196		090 094 095 096
	045 068 110 134	PILOT	137		101 118 132 174
	135 137 141 152	PIONEER	032 090 095 181		185 217 249
	156 157 158 160		196 217	SAISHO	058 059 108 120
	161 162 164 167	PLANTRON	134 196		130 131 196
	197 209 212 219	POPPY	139	SAKIO	134 141
	227 268	PORTLAND	063 144	SALORA	004 007 013 022
	271 284	PRANDONI-PRINCE	024 025 069 070		023 025 028 029
NORDMENDE	015 090 094 095		073 118		033 034 042 067
	101 174 185 215	PRECISION	120		073 086 126 132
	217 249	PRIMA	042 046 063 114		135 152 157 167
NOVA	800		137 139 196		171 173 208
NOVABEAM	196	PRINCE	073		
OCEANIC	016 023 025 029				

DEVICE CODES

BRAND	CODE	BRAND	CODE	BRAND	CODE
TV continued		SOUNDESIGN	033 063 114 137 144 145	THORN-FERGUSON	071 078 204 137
SAMBERS	067 069 070 073 087 118	SPECTRA	143	TOKAI	086 196
SAMPO	063	SPECTRICIAN	063 196	TOKYO	137
SAMSUNG	064 067 077 086 120 134 137 154 188 195 196 206 216	SR2000	042 177	TOSHIBA	042 045 046 070 085 114 127 137
SAMSUX	063	STANDARD	019 117 120 139	TOSHIBA	138 140 177 179 204 286 287 288
SANSUI	107 137 196	STERN	025 075	TOSONIC	137
SANYO	042 043 044 045 075 077 080 086 088 107 111 113 114 115 130 142 188 197 208 247	SUNKAI	059 062 117	TOTEVISION	063
SASO	090	SUNSTAR	139	TOWADA	025 087
SATELLITE	156	SUNWOOD	196	TRANS CONTINENS	073
SBR	110 196	SUPERTECH	014 139	TRIDENT	120
SCHAUB LORENZ	023 025 135 152 158 161 197	SUPERME	144	TRILUX	076 196
SCHNEIDER	014 041 061 065 075 093 110 117 120 134 154 159 187 196 212 258	SUTRON	139	TRISTAR	117
SCOTT	033 063 114 144 145	SYDNEY	120	TRIUMPH	058 070
SEARS	042 177	SYLVANIA	111 196	UHER	019 065 070 078 087 196
SEG	063 087 114 117 120 134 139	SYMPHONIC	033 063 114 144 145	ULTRAVOX	086 087 101 102 124 132
SEI-SINUDYNE	014 024 025 058 059 062 087 101 102 144 151 196	TADISTAR	154	UNIMOR	076 196
SELECO	024 075 093 113 249	TANDBERG	081	UNIVERSUM	018 076 077 080 104 134 167 173 196 244 247
SEMUA	063	TANDY	086 117 120 121 146	UNIVOX	102
SENCORA	139	TASHIKO	035 049 114 120 142	VECTOR/VICTOR	176
SENTURA	041 046 117	TATUNG	048 057 086 107 109 118 120 130 196 253 273 275 283	VESTEL	196 238 266
SHARP	063 111 113 114 142 146 190 214 254 256 267	TEC	120 139 143	VEXA	139 196
SHINTOM	144 154	TECHLINE	087	VIDEOLOGIQUE	117 120
SHORAI	062	TECHNEMA	019	VIDEOTON	004 095 099
SIAREM	087 101 102 118	TECHNICS	155 196	VISION	019 196
SIEMENS	021 063 082 111 196 244 247	TECHNIMAGEN	236 250	VOXSON	024 070 101 102 196
SIERA	110 159 187	TECHWOOD	137 144	WALTHAM	004 025 099 120
SIERRA	196	TECNSON	154	WARDS	176 196
SIESTA	076 077	TEKNIKA	063 137 145	WATSON	019 117 139 196 244
SIGMAX	137	TEKNON	137 139	WATT RADIO	014 087 124
SIGNATURE	046 144	TELEAVIA	090 094 099	WEGA	101 114
SILVER	114 117	TELECO	154	WELTBlick	196
SINGER	087 101 102	TELEFUNKEN	090 145 174 217 249	WHITE WESTINGHSE.	019 042 124
SINOTEC	154	TELEMEISTER	019	WORLD-TECH	143
SKANTIC	025	TELEOPTA	141	YOKO	035 079 117 120 134 139 143 196
SNYDER	196	TELETECH	139	YORK	045 196
SOGERA	019	TELETON	025 033 120	YORX	117
SOLAVOX	041	TELEVIDEON	019 073	ZANUSSI	024
SONITRON	045 077	TELIVA	090	ZENITH	144 196
SONOKO	120 134 139 196	TENSAI	003 019 062 080 104 117 120 124 139 154 196		
SONOLOR	016	TENSON	139		
SONTEC	077 196	TESLA	196		
SONY	026 107 113 114 130 133 144 203 210	TEXET	120		
SOUND&VISION	087 117	THOMAS	049 063 086 090 137 139 144 196		
		THOMSON	006 008 033 090 094 095 096 099 174 185 217 229 233 249		
		THORN	020 028 029 030 041 044 045 046 049 054 069 080 082 088 090 097 107 113 114 129 138 144 153 174 196		

DEVICE CODES					
BRAND	CODE	BRAND	CODE	BRAND	CODE
VCR		CTC CLATRONIC	014		027 028 029 039
ACTION	016 029 160	CURTIS MATHES	064 066		041 047 078 091
ADMIRAL	029 040	DAEWOO	011 014 016 065		142 144 155 158
ADVANTZ	029		067 068 072 073		179
ADVENTURA	016 029 160		163 173 174	HYPSON	040
ADYSON	040	DANSAI	040	IMPERIAL	041 100 148
AGHA	160	DAYTRON	014 065	INGELEN	047 048 094 110
AIWA	029 041 047 058	DE GRAAF	020 041 052 057	INGERSOL	082 147
	077 116 120 125	DECCA	041 047	INNO HIT	097 148 160
	144 167 170	DENON	138	INTERBUY	029 040
AKAI	003 024 029 030	DIGITAL	024 029 144	INTERFUNK	016 138
	032 036 037 038	DTS	160	INTERVIDEO	014
	047 074 094 096	DUAL	047 094 138 142	INTERVISION	040
	107 128 144 159		143 144 155	IRRADIO	029 040
	164	DUMONT	016 029 040 041	ITT	010 016 036 047
AKIBA	040		057 138		088 107 144
AKURA	031 116 144	DYNATECH	040 041	ITT-NOKIA	047 048 094 110
ALBA	014 031 065 077	ECONOMIC	148	ITV	014 029
	118 123 124 125	ELECTROHOME	029 160	JENSEN	047 144
ALLORGAN	160	ELECTROPHONIC	029	JVC	001 009 012 047
AMSTRAD	041	ELIN	160		048 050 089 094
ANITECH	040	ELTA	040		116 119 129 142
ARC EN CIEL	047 048 094	EMERSON	013 029 034 041		143 144
ARISTONA	052 095 113		064 066 077	KAISUI	040
ASA	029 057 058	ESC	014 148	KENDO	036
ASTRA	029 160	ETZUKO	040	KENWOOD	016 047 050 116
ASUKA	029 040 138	FERGUSON	002 005 047 087		144
AUDIO DYNAMICS	144		089 094 098 104	KLH	029 040
AUDIOTON	014		108 112 126 132	KODAK	029
AUDIOVOX	029		141 144 152 153	KORPEL	040
AVIS	040 160		165 171 176 177	KRIESLER	052 095 113
BAIRD	047 107 144		178	KUBA ELECTRONIC	143 144 148
BANG&OLUFESEN	142	FIDELITY	040 041	L.G.	016 029 058 160
BASICLINE	031 040 065 077	FINLANDIA	057	LEYCO	040
BEAUMARK	160	FINLUX	016 020 024 041	LLOYD	029 040 041 160
BELL&HOWELL	016		057	LOEWE	029 069 138
BESTAR	014	FIRSTLINE	024 029 040	LOEWE OPTA	057 086 095 113
BLAUPUNKT	090 095 102 111	FISHER	016	LOGIK	031 040 045 077
	113 138 145 146	FUNAI	029 040 041 169		082 107 147 160
	155		181	LORWD	024
BONDSTEC	014 040	GAB	040	LUXOR	016 036 107 110
BRANDT ELECTRON.	047 048 094 142	GBC	014 097		150 151
	143 144	GE	064 066 160	LXI	016 024 029 058
BRION VEGA	010	GELOSO	014 097	M ELECTRONTC	160
BROKSONIC	029	GOLDHAND	040	MAGNASONIC	017 029 040 110
BRUNS	014 040	GOLDSTAR	016 029 058 160		160
BUSH	030 031 065 077	GOODMANS	014 031 040 041	MAGNAVOX	029 064 066 138
	123 124		045 053 057 058		145 160
	125		065 077 133 155	MAGNIN	029 160
CALIN	029	GRAETZ	016 047 048 088	MANESTH	040
CAPEHART	065		094 110 144	MARANTZ	053 057 077 095
CARRERA	160	GRANADA	016 024 057 113		113
CARVER	138		129 166	MARQUANT	040
CGE	041 047 094 144	GRANDIN	029 040	MARTA	029
CIE	040	GRUNDIG	057 090 095 101	MATSUI	013 034 045 058
CITIZEN	029 040 160		102 103 113 138		077 082
CLASSIC	029		145 155		118 122 125 137
CLATRONIC	014	HANSEATIC	029		138 147
COLORTYME	160	HARVARD	040	MEMOREX	016 029 041 052
COLT	040	HCM	014 040		058 160
CONDOR	014	HEADQUARTER	016	MEMPHIS	040
CONTINENTAL ED.	040 047 048 094	HIFIVOX	047 048 094	METZ	095 102 109 113
	142 143 144	HINARI	013 031 040 076		138 145
CRAIG	029 040 045 160		077 082 097 116	MGA	056 160
CROSLEY	029 138 145 160		121 125 147	MINERVA	090 102 113
CROWN	040	HITACHI	020 021 023 024	MINOLTA	020 024 027

DEVICE CODES

BRAND	CODE	BRAND	CODE	BRAND	CODE
VCR continued					
MITSUBISHI	050 056 080 127 138 144	PROFEX	040	SHOGUN	160
MTC	040 041 045 160	PROFILE	160	SHORAI	147
MTS	016 024 029	PROLINE	041	SIEMENS	016 017 029 090 095 102
MULTITECH	014 029 031 040 041	PROSCAN	024 029 036 160		110 113 155
MURPHY	041	PROTEC	040	SIERA	052 095 113
NAD	160	PULSAR	029 160	SILVA	029
NAONIS	047 048 094	PULSER	016 029 160	SINGER	040 160
NATIONAL	111 145	PYE	052 057 086 095 113	SINUDYNE	082
NEC	047 050 094 143 144	QUARTER	016	SOLAVOX	014
NECKERMANN	010 013 017 024 047 094 113 144 147 148	QUARTZ	029 160	SONTEC	029
NESCO	040	QUASAR	138 145	SONY	051 054 055 081 085
NIKKAI	014 029	QUELLE	010 013 017 024 028 038 040 051 102 113 142 143 144 147 148	SR1000	160
NOBLIKO	113	QUESTAR	014	STERN	047 048 094
NOGAMATIC	047 048 094	RADIALVA	029 040 138	STS	020 024
NOKIA	010 016 017 036 047 048 088 094 107 110 115 117 142 143 144 148 149 150 151 160 162 163 164 166 168 180	RADIOLA	052 095 113	SUNKAI	077
		RANDEX	029	SUNWOOD	040
		RCA	024 029 036 064 066 160	SYLVANIA	041 056 138
		REALISTIC	016 029 041 045 052 053 160	SYMPHONIC	029 040 041 056 138
		REX	001 047 048 094 142 144	TAISHO	147
		RICOH	029	TANDY	016
		ROADSTAR	031 040 045 058 160	TASHIKO	041
		ROYAL	014 040	TATUNG	041 047 138 144
		SABA	001 009 018 025 047 048 094 106 142 143 144 153	TEAC	041 047 144
		SAISHO	013 034 077 082 091 118 147	TEC	014
		SALORA	015 016 017 036 056 129 149 150	TECHLINE	040
		SAMEX	160	TECHNICS	138 156
		SAMSUNG	045 059 061 064 066 070 071 096 100 148 160	TEKNIKA	029 041
		SANKY	040	TELEAVIA	047 048 094 142 144
		SANSUI	047 050 144	TELEFUNKEN	009 018 026 047 048 094 140 142 143 144 153
		SANWA	147	TELEORDER	160
		SANYO	016 017 042 077 110 131 162	TELERENT	144
		SBR	057 083 086 138	TELETECH	040
		SCHAUB LORENZ	010 016 036 047 048 088 094 110 144	TENOSAL	031
		SCHNEIDER	024 028 029 031 040 041 052 095 100 113 138 148 155 169 172	TENSAI	029 040 147
		SCOTT	029	THOMAS	160
		SEARS	016 024 029	THOMSON	018 022 047 048 094 140 142 143 144
		SEG	040 100 148 160	THORN	032 047 089 094 114 141 142 143 144
		SEI-SINUDYNE	082 138 147	THORN-FERGUSON	025 047 087 089 094 098 104 108 112
		SELECO	047 048 094 142 143 144	TOKAI	029 040
		SENTRA	014 065	TOSHIBA	011 029 047 048 056 084 094 138 144 160
		SETRON	040	TOTEVISION	029 045 160
		SHARP	016 052 053 062 079 175	TOWADA	040
		SHINTOM	031 040	TOWIKA	040
		SHIVAKI	029	TRIX	029
				TVA	014
				UHER	024 029 047 100 142 144 148
				ULTRAVOX	010
				UNITECH	045 160
				UNIVERSUM	029 036 138 155 160 169
				VICTOR	047 050 144

DEVICE CODES					
BRAND	CODE	BRAND	CODE	BRAND	CODE
VCR continued		SAT		TPS	161
VIDEOMATER	014	BUSH	024	VIDIO WAY	019
VIDEOSONIC	160	CANAL+	160	WEWASAT	024
VIEWMARK	029	CARLTON	035	WISI	021 024
WARDS	024 040 064 066	CHAPARRAL	016		
	160	DNT	018 021		
WELTBlick	029	ECHOSTAR	020 021 022 025		
WHITE WESTINGHOUSE	010		031 065 081 082		
XR 1000	040 160		088 108		
YAMAHA	047	ELLIES ELECT	153 154		
YAMASHI	040	ELSAT	163		
YOKO	014 029 040 148	EP SAT	024		
	160	FERGUSON	024		
ZANUSSI	047 048 094	FINLUX	024		
ZENDER	094	FUBA	018		
ZOPPAS	047 048	GENERAL INSTRUM.	203		
		GRAETZ	009 110		
		GRUNDIG	024		
		HITACHI	024 066		
		HUMAX	033		
		INGELEN	110		
		ITT	085		
		ITT-NOKIA	024 025 110		
		JERROLD	202 203		
		LUXOR	009 011 012 013		
			014 018 027 028		
			110		
		MANHATTAN	024		
		MASPRO	024		
		MEDIASTAR	035		
		MULTICHOICE	165		
		NOKIA	008 009 010 011		
			012 013 014 017		
			018 024 026 027		
			028 029 032 040		
			067 110 133 166		
			171		
		NORDMENDE	024		
		OCEANIC	010		
		PACE	015 024 034 039		
			153 154 162 167		
		PANASAT	164		
		PANASONIC	036		
		PANDA	024		
		PHILIPS	023 024 038 169		
		PROMAX	024		
		RADIX	021		
		RITAR	011		
		SABA	024		
		SABRE	024		
		SALORA	009 011 012 013		
			018 110		
		SATEC	024		
		SATELLITE	027		
		SCHAUB LORENZ	110		
		SCHWAIGER	024		
		SEEMANN	021		
		SKY	151		
		SONY	170		
		TANTEC	024		
		TELEFUNKEN	024		
		TELEVES	024		
		THOMSON	024		
		THORN	024		
		TONNA	024		
		TOSHIBA	168		

